

Amendments to the Claims

Please amend claims 1-8, 13-16, 21, and 23 as set forth in the attached listing of claims. The listing of claims below will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Original) An Internet base station system comprising:
 - a first communication unit which transmits data to and receives data from an Internet mobile station;
 - a second communication unit which transmits data to and receives data from an Internet mobile switching center system and an Internet home location register system;
 - a storage unit which stores its own Internet Protocol address and at least one or more rental Internet Protocol addresses which are allocatable to the Internet mobile station;
 - a channel allocation unit which allocates a communication channel to a sending Internet mobile station when the sending Internet mobile station transmits a call requesting message to the Internet mobile switching center system via the first communication unit or when the Internet mobile switching center system transmits the call requesting message to a receiving Internet mobile station;
 - an address allocation unit which allocates a rental Internet Protocol address to the sending Internet mobile station, transmits address allocation information comprising identification information and the rental Internet Protocol address of the Internet mobile station, and the Internet Protocol address of the storage unit to the Internet mobile switching center system, withdraws the rental Internet Protocol address from the sending Internet mobile station when mobile communication between the sending Internet

mobile station and the receiving Internet mobile station ends, and informs the Internet mobile switching center system of the withdrawal of the rental IP address; and

a call controller which receives an Internet Protocol address of the receiving Internet mobile station from the Internet mobile switching center system, transmits the Internet Protocol address of the receiving Internet mobile station to the sending Internet mobile station, and relays speech Internet Protocol packets between the sending Internet mobile station and the receiving Internet mobile station via the communication channel of the sending Internet mobile station.

2. (Original) The Internet base station system of claim 1, wherein the call controller performs a handoff process for the Internet mobile station and instructs the channel allocation unit and the address allocation unit to withdraw the communication channel and the rental Internet Protocol address from the Internet mobile station to disconnect a call when an adjacent Internet base station server takes over a function of managing the Internet mobile station; the channel allocation unit withdraws the communication channel from the Internet mobile station during the handoff for the Internet mobile station; and the address allocation unit withdraws the rental Internet Protocol address from the Internet mobile station during the handoff for the Internet mobile station and informs the Internet mobile switching center system of the withdrawal of the rental Internet Protocol address from the Internet mobile station.

3. (Original) The Internet base station system of claim 2, wherein when the call controller receives a request for the handoff from the Internet mobile station, the call controller instructs the channel allocation unit and the address allocation unit, respectively, to withdraw the communication channel and the rental Internet Protocol address

4. (Original) The Internet base station system of claim 2, wherein the call controller requests the Internet mobile switching center system for the handoff when an intensity of a signal received from the Internet mobile station is lower than a predetermined reference intensity, and the call controller instructs the channel allocation unit and the address allocation unit, respectively, to withdraw the communication channel and the rental Internet Protocol address when the Internet mobile switching center system selects one among a plurality of adjacent Internet mobile station systems to manage the Internet mobile station so as to complete the handoff.

5. (Original) The Internet base station system of claim 1, wherein the call requesting message comprises identification information of the sending Internet mobile station and identification information of the receiving Internet mobile station.

6. (Previously Presented) The Internet base station system of claim 1, wherein the identification information of the Internet mobile station comprises at least one of a phone number allocated to the Internet mobile station and an electronic serial number allocated to the Internet mobile station.

7. (Original) The Internet base station system of claim 1, wherein the address allocation unit allocates the rental Internet Protocol address to the Internet mobile station, and stores the rental Internet Protocol address and the identification information of the Internet mobile station in the storage to link the rental Internet Protocol address with the identification information.

8. (Original) The Internet base station system of claim 1, wherein when the call controller receives the call requesting message from the sending Internet mobile station, the call controller requests the Internet mobile switching center system to allocate the communication channel and the rental Internet Protocol address to the receiving Internet mobile station based on the

identification information of the receiving Internet mobile station, and transmits the rental Internet Protocol address of the receiving Internet mobile station to the sending Internet mobile station.

13. (Original) A method of providing a wireless Internet mobile communication service, comprising:

(a) when a call requesting message is received from a first Internet mobile station or the call requesting message is transmitted from an Internet mobile switching center system to the first Internet mobile station, allocating a communication channel to the first Internet mobile station;

(b) allocating a rental Internet Protocol address to the first Internet mobile station and transmitting address allocation information comprising identification information and the rental Internet Protocol address of the first Internet mobile station, and an Internet Protocol address and identification information of a second Internet mobile station which is a corresponding Internet mobile station of the first Internet mobile station to the Internet mobile switching center system;

(c) transmitting the Internet Protocol address of the second mobile station from the Internet mobile switching center system to the first Internet mobile station;

(d) relaying speech Internet Protocol packets between the first Internet mobile station and the second Internet mobile station via a communication channel allocated to the first Internet mobile station; and

(e) when speech communication between the first Internet mobile station and the second Internet mobile station ends or a handoff for the first Internet mobile station and/or the second Internet mobile station is performed, withdrawing the rental Internet Protocol address from the first Internet mobile station and/or the second Internet mobile station and informing the Internet mobile switching center system of the withdrawal of the rental IP address from the first Internet mobile station and/or the second Internet mobile station.

14. (Original) The method of claim 13, wherein step (e) comprises:
- (e1) measuring an intensity of a signal received from the Internet mobile station;
 - (e2) when the measured intensity is lower than a predetermined reference intensity, requesting the Internet mobile switching center system for the handoff
 - (e3) when receiving an instruction to perform the handoff by selecting one of a plurality of adjacent Internet base station systems using the Internet mobile switching center system to manage the Internet mobile station, withdrawing the communication channel and the rental Internet Protocol address from the Internet mobile station; and
 - (e4) informing the Internet mobile switching center system of the withdrawal of the rental IP address from the Internet mobile station.

15. (Original) The method of claim 13, wherein the identification information of the Internet mobile station comprises at least one of a phone number and an electric serial number of the Internet mobile station

16. (Canceled)

21. (Canceled)

23. (Previously Presented) The Internet base station system of claim 5, wherein the identification information of the Internet mobile station comprises at least one of a phone number allocated to the Internet mobile station and an electronic serial number allocated to the Internet mobile station.